

REMARKS

Claims 10, 16-24, 26 and 29-50 are pending in the above-captioned patent application after this amendment. The title of the specification has been objected to by the Patent Office. The title has been amended pursuant to the request of the Patent Office, and additional portions of the specification have been amended to correct obvious typographical errors and to clarify what the applicant regards as the invention. Claims 1-28 have been rejected. The applicant respectfully traverses the rejection of claims 10, 16-24 and 26. Claims 10 and 26 have been amended to include the limitations of their respective base claims, claims 1-9, 11-15, 25 and 27-28 have been canceled without prejudice and claims 29-50 have been added by this amendment for the purpose of expediting the patent application process in a manner consistent with the goals of the Patent Office pursuant to 65 Fed. Reg. 54603 (September 8, 2000), even though the applicants believe that the previously pending claims were allowable.

Support for the amendments to the claims and for new claims 29-50 can be found throughout the originally filed application, including the originally filed claims, the drawings and the specification. More specifically, support for the amendments to the claims and for new claims 29-50 can be found at least in Figures 1, 2A and 2B, in claims 2, 4, 6-12, 20, 22, 23 and 25-26, and in the specification at page 4, line 26 through page 5, line 7, at page 6, lines 3-8, at page 7, lines 24-28, and at page 10, line 19 through page 11, line 17.

No new matter is believed to have been added by this amendment. Consideration of the pending application is respectfully requested.

Objection to the Specification

The Patent Office has objected to the title of the invention as not being descriptive. Therefore, the Applicant has amended the title to provide a more detailed description of the invention pursuant to the request of the Patent Office. More specifically, the Applicant has added -- for the drive housing -- before "of a recording drive", which provides a more detailed description of the present invention. Thus, the objection is believed to have been overcome.

Rejections Under 35 U.S.C. § 112

Claim 14 is rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The applicant respectfully disagrees with the rationale of the Patent Office in this regard. For example, the Patent Office states in its rejection that the claim "contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the specification does not enable a skilled artisan to make and/or use a disk drive with perpendicular recording." This statement is inconsistent with the assertion also provided by the Patent Office, that "official notice is taken of the fact that perpendicular recording drives are notoriously old and well known in the disk drive art." Without commenting on the validity of the statements by the Patent Office, the applicant respectfully submits that a skilled artisan would be able to incorporate the housing provided in the disclosure with a disk drive that is well known in the art.

Notwithstanding the above, claim 14 has been canceled without prejudice by this amendment for reasons unrelated to the rejection by the Patent Office under 35 U.S.C. § 112, first paragraph. Therefore, the rejection by the Patent Office of claim 14 is believed to be moot.

Rejections Under 35 U.S.C. § 103

Claims 1-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over IBM Technical Disclosure Bulletin, November 1990 (hereinafter "IBM") in view of Nakazawa et al. (JP 10-69763). Claims 1-9, 11-15, 25 and 27-28 have been canceled without prejudice by this amendment. Claims 10 and 26 have been amended to include all of the limitations of their respective base claims. Further, the Applicant respectfully traverses the rejection of claims 10, 16-24 and 26 on the grounds that the cited combination of references do not teach or suggest the claimed invention. Moreover, the cited combination of references do not provide a motivation or suggestion to combine the references. Additionally, one or more of the cited references is nonanalogous art and is therefore an improper prior art reference. Consequently, the Applicant submits that the rejection of claims 10, 16-24 and 26 should be withdrawn, and that these claims

should be allowed.

For example, IBM is directed toward an enclosure including an outer cover and an inner frame. The enclosure is used for external peripheral devices, such as disk drives, floppy disk drives, CD ROM drives, optical drives, etc. The enclosure includes a tunnel 1 into which the entire peripheral device is placed and mounted. In the case of a peripheral disk drive, the disk drive already includes its own drive housing, which is entirely separate from the enclosure disclosed in IBM. Thus, the drive housing of the peripheral device is removably mounted to the tunnel of the enclosure. IBM does not teach or suggest a disk drive that includes a drive housing and a storage disk that is rotatably mounted to the drive housing. Therefore, it logically follows that IBM does not teach or suggest using specific materials to obtain a minimum attenuation of field for such a drive housing since the drive housing is not even discussed.

Further, the enclosure disclosed in IBM teaches that the "dimensions [of the enclosure] are such that 10-15 dB of shielding is provided for vertically polarized fields and >30 dB attenuation for horizontally polarized fields." Importantly, IBM only discloses obtaining a certain level of attenuation as a result of the dimensions of the enclosure, not the materials used. Assuming *arguendo* that the enclosure is being analogized with the drive housing of the claimed invention, IBM teaches an attenuation of field in the vertical direction of 10-15 dB, and in the horizontal direction of >30 dB based on the spacing provided by the enclosure relative to the peripheral device. IBM does not teach or suggest using a housing shield that has an attenuation of field of at least 50 dB.

Additionally, because IBM does not teach or suggest any specific materials to be used to form the enclosure, there is absolutely no discussion of any minimum level of relative permeability of the material used to form the enclosure. Stated another way, IBM does not teach or suggest using materials having a relative permeability of at least 50,000 or 100,000.

Based on the computer translation provided by the Patent Office, Nakazawa et al. appears to be directed toward an optical disk player (such as a CD player) that includes an optical pickup 4. (Paragraph 0002). Nakazawa et al. discloses that power transformers and the like have had a "bad influence" on the operation of the optical

pickup 4. (Paragraph 0003). Nakazawa et al. appears to suggest that an electric conduction paste, foils or fibers can be applied to the outer frame 1 of the optical disk player and the covering of the optical pickup 4. (Paragraph 0012). Nakazawa et al. does not teach or suggest modifying a disk drive. In fact, Nakazawa et al. states that it can apply to "other optical disk players, for example, videodisk player, etc." (Paragraph 0019).

Somewhat similar to IBM, Nakazawa et al. does not appear to teach or suggest that specific materials be used which can attain any specific level of attenuation of field. More specifically, Nakazawa et al. does not teach or suggest a drive housing having a housing shield having an attenuation of field of 25 dB or 50 dB, in any direction relative to the optical disk player. In addition, Nakazawa et al. does not teach or suggest a drive housing that has a relative permeability of at least 50,000.

In contrast to the cited references, amended claim 10 is directed toward a drive housing for a disk drive, the drive housing requiring "a housing shield positioned near the storage disk, the housing shield being sized, shaped and formed from a material so that the housing shield has an attenuation of field of at least approximately 50 dB." These features are not taught or suggested by the cited combination of references. Therefore, amended claim 10 is believed to be patentable.

Further, claim 16 requires "a housing shield positioned near the storage disk, the housing shield being formed from material having a relative permeability of at least approximately 50,000." These features are not taught or suggested by the cited combination of references. Therefore, claim 16 is believed to be patentable. Because claims 17-24 depend directly or indirectly from claim 16, they are also believed to be patentable.

Amended claim 26 is directed toward a disk drive that requires "a storage disk including a storage surface; and a drive housing that encircles the storage disk, the drive housing including a housing shield positioned near the storage disk, the housing shield having an attenuation of field of at least approximately 50 dB and including (i) a base shield portion that is positioned substantially parallel to the storage surface of the storage disk, (ii) a cover shield portion that is positioned substantially parallel to the storage surface of the storage disk, the storage disk being positioned substantially

between the cover shield portion and the base shield portion, and (iii) a wall shield portion that secures the cover shield portion to the base shield portion, the wall shield portion being positioned substantially perpendicular to the storage surface of the storage disk; wherein each of the shield portions is formed from material having a relative permeability of at least approximately 100,000." These features are not taught or suggested by the cited combination of references. Therefore, amended claim 26 is considered to be patentable.

Additionally, claims 10, 16-24 and 26 are patentable over the cited combination of references because there is no motivation to use the outer frame 1 taught by Nakazawa et al. in the IBM enclosure. "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure." *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991; Emphasis added). In the present case, neither is found.

Even if the combination of references taught every element of the claimed invention (which it does not), without a motivation to combine, a rejection based on a prima facie case of obviousness has been held improper. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). Further, the "mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990; emphasis original and added). In the present case, the prior art does not clearly suggest the desirability of the resultant combination. Additionally, an obviousness rejection based on a combination of references must be supported by "objective evidence of record". *In re Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002). Further, it is insufficient to base such rejection merely on "common knowledge or common sense." *Id.*

The enclosure taught by IBM has a particular level of attenuation (10-15 dB for vertically polarized fields, and >30 dB for horizontally polarized fields) which "provides adequate protection for typical peripheral devices." In other words, a higher level of attenuation in either direction is unnecessary according to IBM. Thus, according to IBM, there would be no clear benefit in providing a greater level of attenuation. Even if IBM provided the suggestion that a higher level of attenuation were necessary (which it does

not), Nakazawa et al. does not disclose what level of attenuation, if any, is provided by the outer frame of Nakazawa et al. Moreover, Nakazawa et al. is directed toward optical disk players having optical pickups, not disk drives using magnetic storage disks.

In summary, one of ordinary skill in the art of peripheral enclosures who reads IBM would not be concerned with attaining a greater level of attenuation than that which is discussed relative to the enclosure disclosed in IBM. Further, one looking to solve the problem of the effect of extraneous external magnetic fields on the inner workings of a disk drive would not be concerned with optical disk players using optical pickups. As a result thereof, there is no motivation in the references to use the outer frame taught by Nakazawa et al. in device disclosed in IBM.

Finally, the Patent Office has relied on nonanalogous art in its rejection. The rejection by the Patent Office under 35 U.S.C. §103(a), which is based on Nakazawa et al. is improper because a skilled artisan in the field of disk drives would not be expected to search nonanalogous art such as Nakazawa et al. The Federal Circuit has stated that nonanalogous art is inadmissible evidence of whether or not an invention was obvious under 35 U.S.C. §103(a). In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). The determination of whether prior art is analogous involves determining (i) whether the reference is within the field of the invention's endeavor; or (ii) if the reference is not within the field of the endeavor, whether the field of the reference is reasonably pertinent to the particular problem. Id.

In In re Oetiker, the Applicant claimed an improvement in a hose clamp which differed from the prior art in the presence of a preassembly "hook" which maintained the preassembly condition of the clamp and disengaged automatically when the clamp was tightened. In re Oetiker. The Board relied upon a reference which disclosed a hook and eye fastener for use in garments, reasoning that all hooking problems are analogous. In re Oetiker. The court held that the reference was not within the field of applicant's endeavor, and was not reasonably pertinent to the particular problem with which the inventor was concerned because it had not been shown that a person of ordinary skill, seeking to solve a problem of fastening a hose clamp, would reasonably be expected to look to fasteners for garments. In re Oetiker.

Here, the optical disk player including the optical pickup disclosed in Nakazawa

et al. presents its own problems relating to electromagnetic fields, which relate to the optical pickup. An optical pickup is noticeably absent from a typical disk drive. Thus, the Applicant, seeking to solve the problem of preventing extraneous magnetic fields from influencing the interaction between magnetic storage disks and a data transducer, would not be expected to look to optical disk players. Therefore, Nakazawa et al. is considered to be nonanalogous art, and is not properly cited as a reference against claims 10, 16-24 and 26. As a consequence, the Applicants submit that the rejection of claims 10, 16-24 and 26 under 35 U.S.C. § 103(a) is improper, and that claims 10, 16-24 and 26 are in condition for allowance.

New Claims

New claims 29-50 have been added by this amendment. New claims 29-50 are of a slightly different scope than the previously pending claims. However, in view of the cited references, claims 29-50 are believed to be patentable.

In contrast to the cited references, new claim 29 is directed toward a disk drive that requires "a storage disk having a storage surface; and a drive housing that is positioned so that the storage disk is rotatably mounted to the drive housing, the drive housing including a housing shield that is formed from material that provides an attenuation of field of at least 25 dB that at least partially shields the storage surface from an external magnetic field that is applied in a direction that is substantially perpendicular to the storage surface." These features are not taught or suggested by the cited combination of references. Thus, new claim 29 is believed to be patentable. Because new claims 30-39 depend directly or indirectly from claim 29, they are also considered to be patentable.

New claim 40 is directed toward a disk drive that requires "a storage disk having a storage surface; and a drive housing that is positioned so that the storage disk is rotatably mounted to the drive housing, the drive housing including a housing shield that is formed from material that provides an attenuation of field of at least 50 dB that at least partially shields the storage surface from an external magnetic field that is applied in a direction that is substantially parallel to the storage surface." These features are not taught or suggested by the cited combination of references. Thus, new claim 40 is

believed to be patentable. Because new claims 41-47 depend directly or indirectly from claim 40, they are also considered to be patentable.

New claim 48 is directed toward a method that requires the steps of "rotatably mounting a magnetic storage disk having a storage surface to a drive housing having a housing shield; and forming the housing shield from material that provides an attenuation of field of at least approximately 25 dB to at least partially shield the storage surface from an external magnetic field that is applied in a direction that is substantially perpendicular to the storage surface." These steps are not taught or suggested by the cited combination of references. Thus, new claim 48 is believed to be patentable. Because new claims 49-50 depend directly or indirectly from claim 48, they are also considered to be patentable.

Remaining References

The references cited by the Examiner, but not relied on for the rejection of claims, have been noted. The remaining references are no more pertinent than the applied references, therefore, a detailed discussion of these remaining references is deemed unnecessary for a full and complete response to the Office Action.

Conclusion

In conclusion, Applicant respectfully asserts that claims 10, 16-24, 26 and 29-50 are patentable for the reasons set forth above, and that the application is now in a condition for allowance. Accordingly, an early notice of allowance is respectfully requested. The Examiner is requested to call the undersigned at 858-456-1951 for any reason that would advance the instant application to issue.

Dated this the 24th day of June, 2003.

Respectfully submitted,



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